

Online Workshop on
“Memory Effects in Dynamical Processes: Theory and Computational
Implementation”

June 23 - June 25, 2021

organized by

Christoph Dellago (U Vienna), Anja Kuhnhold (U of Freiburg), Hugues Meyer (U of Saarland),
Tanja Schilling (U of Freiburg)

• **Wednesday, June 23rd, 2021**

14:00 – 14:15 **Welcoming word**

14:15 – 14:45 **Angelo Vulpiani (U Roma 1)**

Understanding causation via correlations and linear response theory

14:45 – 15:15 **Hugues Meyer (U of Saarland)**

Generalized Langevin Equations in time-dependent contexts

15:15 – 15:45 **Raphael Wittkowski (U Münster)**

Jerky active matter model: particle dynamics with translational and orientational memory

15:45 – 16:15 **Coffee break**

16:15 – 16:45 **Karen Palacio-Rodríguez (Sorbonne U, Paris)**

Data-driven Langevin equations from transition path sampling trajectories

16:45 – 17:15 **Viktor Klippenstein (TU Darmstadt)**

Cross-correlation corrected friction in (generalized) Langevin models

17:15 – 17:45 **talk shared with Rodolphe Vuilleumier - Benjamin Rotenberg (CNRS, Paris)**

Computing memory kernels from noise reconstruction by a deterministic approach

17:45 – 18:15 **Hadrien Vroylandt (Sorbonne U, Paris)**

Computing memory kernels from noise reconstruction by a stochastic approach

• **Thursday, June 24th, 2021**

14:00 – 14:30 **Julia Yeomans (U Oxford)**

Active Matter: from 2D to 3D

14:30 – 15:00 **Martin Hanke (U Mainz)**

Model reduction techniques for the computation of extended Markov parameterizations for generalized Langevin equations

15:00 – 15:30 **Thomas Franosch (U Innsbruck)**

Persistent correlations in colloidal suspensions – noise cancellation algorithm

15:30 – 16:00 **Thomas Voigtmann (DLR, Köln)**

Aging in glasses: generalized Langevin equations and scaling laws

16:00 – 16:30 **Coffee break**

16:30 – 17:00 **Friederike Schmid (U Mainz)**

Memory Kernels and Fluctuation-Dissipation Relations far from Equilibrium

17:00 – 17:30 **Felix Höfling (FU Berlin)**

Spectral approaches to memory: friction in liquids and a generalised master equation

17:30 – 18:00 **Matthias Schmidt (U Bayreuth)**

Power functional perspective on memory in liquids

18:00 – 18:15 **Coffee break**

18:15 – 19:30 **Poster session**

• **Friday, June 25th, 2021**

14:00 – 14:30 **Peter Sollich (Georg-August-U, Göttingen)**

Memory in subnetwork dynamics

14:30 – 15:00 **Marcus Müller (U Göttingen)**

Kinetics of structure formation in multicomponent polymer systems

15:00 – 15:30 **Sara Jabbari-Farouji (U Amsterdam)**

Mechanical memory effects in solid-like polymers

15:30 – 16:00 **Coffee break**

16:00 – 16:30 **Suzanne Fielding (Durham U)**

Ductile and brittle yielding in amorphous materials

16:30 – 17:00 **Marjolein Dijkstra (Utrecht U)**

Machine-Learning Many-Body Potentials for Colloidal Systems

17:00 – 17:30 **Sara Bonella (EPF Lausanne)**

Generalized Langevin equations for simulating nuclear quantum effects

17:30 – 17:45 **Closing word**

All talks take place at the Erwin Schrödinger Institute - virtual via zoom! Zoom coordinates are available on request (secr@esi.ac.at) and after registration until June 22rd, 2021.